Page 1 Terms & Processes

Acetyl CoA	Glycolysis	No O_2 present: Fermentation	Mitochondrion	Glucose
O_2 present: Aerobic cellular respiration	Cytoplasm	Krebs's Cycle	Pyruvate	Ethanol or Lactic Acid

Page 2 Terms & Steps

NAD+ reduced to NADH	Glucose oxidized to pyruvate	Lactic Acid	NADH oxidized to NAD+
Glucose	Ethanol	ADP + Pi	Glycolysis
Substrate-Level phosphorylation	Lactic Acid Fermentation	Ethanol Fermentation	Pyruvate
Pyruvate reduced to acetaldehyde and then ethanol	CO_2	Pyruvate reduced to Lactic Acid	ATP

Page 3 Terms & Steps

Electrons carried via NADH	Mitochondrion	ATP made by Substrate-Level Phosphorylation	Cytoplasm
Pyruvate Oxidation	Glycolysis	Electrons carried by NADH & $FADH_2$	Glucose
ATP made by Oxidative Phosphorylation	Chemiosmosis	Oxidative Phosphorylation	Acetyl CoA
Electron transport Chain	Krebs's Cycle	Pyruvate	

Page 4 Structures & Processes

Mitochondrion	Inner Membrane	Krebs's Cycle	ETC & Chemiosmosis	High pH/Alkaline (Low H+)	Glycolysis
Cytoplasm	Intermembrane Space	Outer Membrane	Cristae	Low pH/Acidic (High H+)	Matrix

Page 5 Terms & Steps

NAD+ reduced to NADH	Pyruvate oxidized to Acetyl CoA	Krebs's Cycle	FADH reduced to $FADH_2$
Acetyl CoA enters Krebs's Cycle	Organic Oxidations produce CO_2	ADP + Pi	CO_2
ATP	Pyruvate	Substrate-Level phosphorylation	Organic Oxidations produce NADH
Organic oxidations produce $FADH_2$	Organic molecules recycled	Matrix	

Page 6 Terms & Steps

Oxidative Phosphorylation	e-	Chemiosmosis powers ATP Synthase	Mitochondrial Inner Membrane
ATP	Low pH/Acidic (High H+)	H+	NAD+ recycled to glycolysis & Krebs's Cycle
O_2	Intermembrane Space	ATP Synthase enzyme forms ATP	NADH
High pH/Alkaline (low H+)	ADP + Pi	Electron Transport Chain generates H+ gradient	Mitochondrial Matrix
Electron carrier proteins	$FADH_2$	H_2O	FADH
O_2 combines with H+ to form H_2O	NADH & $FADH_2$ electrons power ETC		